the effusion cell shutters.

LISTING OF CLAIMS

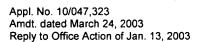
Claim 1 (currently amended): A <u>solid source</u> method of growing a SiC film within an MBE system having a growth chamber and effusion cells having shutters, comprising the steps of:

charging a first crucible with a quantity of Fullerenes;
installing said first crucible into a first effusion cell;
placing said first effusion cell into the growth chamber;
coating a second crucible with a layer of SiC;
charging said second crucible with a quantity of solid Si;
installing said second crucible into a second effusion cell;
placing said second effusion cell into the growth chamber;
providing a SiC substrate;
preparing said substrate;
loading said substrate into the growth chamber;
evacuating the growth chamber;
heating said substrate;
heating said first effusion cell;
heating said second effusion cell; and,
growing a homoepitaxial layer of SiC upon said substrate by controllably actuating

Claim 2 (original): The method of claim 1 wherein said substrate is heated to a temperature of about 1500° C.

Claim 3 (original): The method of claim 1 wherein said first effusion cell is heated to a temperature range of about 500° C to 650° C.

Claim 4 (original): The method of claim 1 wherein said second effusion cell is heated to a temperature above about 1500° C.



Claim 5 (original): The method of claim 1 wherein said substrate is prepared by chemical-mechanical polishing.

Claim 6 (currently amended): A <u>solid source</u> method of growing a SiC film within an MBE system having a growth chamber and effusion cells having shutters, comprising the steps of:

charging a first crucible with a quantity of Fullerenes; installing said first crucible into a first effusion cell; placing said first effusion cell into the growth chamber; coating a second crucible with a layer of SiC; charging said second crucible with a quantity of solid Si; installing said second crucible into a second effusion cell; placing said second effusion cell into the growth chamber; providing a SiC substrate; polishing said substrate; cleaning said substrate with pressurized CO₂; etching said substrate; rinsing said substrate; drying said substrate with pressurized N₂; loading said substrate into the growth chamber; evacuating the growth chamber; heating said substrate to a temperature of about 1500°C; heating said first effusion cell to a temperature range of about 500° to 650° C; heating said second effusion cell to a temperature above about 1500° C; and, growing a homoepitaxial layer of SiC upon said substrate by controllably actuating the effusion cell shutters.

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